

NORTHWOODS JOURNAL – JANUARY 2023

A Free Publication about Enjoying and Protecting Marinette County's Outdoor Life

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Help Prevent the Spread of Aquatic Invasive Species this Winter and Free Fishing Weekend Jan. 21-22

<https://dnr.wisconsin.gov/newsroom/release/65206> &
<https://dnr.wisconsin.gov/topic/Fishing/anglereducation/freeFishingWeekend>



The Wisconsin Department of Natural Resources (DNR) and UW-Extension are asking anglers to help prevent the spread of aquatic invasive species in Wisconsin's lakes and rivers while ice fishing this winter.

Aquatic invasive species have made their way into Wisconsin's waterways. Still, anglers can reduce the transmission of these invasives even in the winter by checking for and removing any mud or plant material clinging to their gear, including sleds used to haul supplies, before leaving fishing spots.

Invasive species are non-native plants, animals and diseases that cause great ecological, environmental or economic harm. Aquatic invasive species can crowd out native plants and animals and threaten the quality of boating and fishing in Wisconsin waters. (Visit this link for images of these species: <https://dnr.wi.gov/topic/Invasives/documents/NR40Aquatics.pdf>.)

Curly-leaf pondweed (below) and Eurasian watermilfoil are two aquatic invasive species that remain hardy in the winter under the ice, giving them an advantage over our native aquatic plants. The plant-like algae **starry stonewort** dies back for winter, but its tiny, star-shaped bulbils can be present on plants yanked up through the ice or in the mud that can come up if the bottom is disturbed by augers. Disease and the larvae of **invasive snails and mussels** can also be present in the water and mud in winter.



Because of the possible spread of diseases like [Viral Hemorrhagic Septicemia \(VHS\)](#) that can threaten fish populations, it is important to only buy minnows from a licensed Wisconsin bait dealer. Up to two gallons of water may be kept for minnows provided they will be used on the same waterbody or if no lake or river water from the fishing site(s) has been added. Dead bait must be preserved in ways that do not require freezing or refrigeration. Visit the DNR's [webpage on bait preservation](#) to learn more. Find more rules regarding bait in [the current fishing regulations](#).

A few minutes of preventative action can help preserve and protect waterways for generations to come. Before stepping onto the ice to fish and when leaving, ice anglers should:

- **Inspect** boats, trailers and ice fishing equipment for attached aquatic plants, animals or mud
- **Remove** all attached plants or animals
- **Drain** all water from buckets and containers
- **Never move** live fish away from a waterbody (fish out of water = dead)
- **Dispose** of unwanted bait in the trash

To learn more about invasive species and their impacts on Wisconsin's waters and economy, visit the DNR's [aquatic invasive species webpage](#).

FREE FISHING WEEKEND JAN. 21-22, 2023



On Free Fishing Weekend, you can drill a hole and drop a line without a fishing license, trout stamp or salmon stamp. What a great opportunity for family and friends to give it a try! *Free Fishing Weekends are always held the third full weekend in January and the first full weekend in June.*

Wisconsin has more than [50 tackle loaner sites](#) and many of them have ice fishing gear that you can borrow. Office hours vary by site, so contact the loaner site and plan ahead to pick up the gear.

New to fishing or haven't bought a fishing license in 10 years? Want to make it a healthy habit? Try our [First-time buyer - Welcome back](#) resident license for only \$5. [Buy yours today](#). Wisconsin is home to 84,000 miles of rivers and streams, roughly 15,000 lakes and so much more. No matter how you like to explore, there's something in Wisconsin for everyone.



Wisconsin Salt Awareness Week – January 23-27

<https://www.wisaltwise.com/>



Across Wisconsin and much of the United States, waterways are becoming increasingly salty due to road salt, water softeners, dust suppressants, and fertilizers. **We are salting our freshwater.** Elevated salt levels threaten our fisheries, tourism, economy, quality of life, and the health of our aquatic ecosystems.

Where does the salt come from?

The salt entering our water comes from four main sources:

Road Salt:

- One of the most common ways that salt enters our water is from winter salt use on roads, parking lots, and sidewalks.
- Chloride concentration levels peak in the winter and spring due to the road salt that enters the water.
- Road salt has been used as a deicer in Wisconsin since the late 1950s. It was cheap, and it got the job done. But, unfortunately, all the salt we put down doesn't just go away.
- Today, [Salt Wise Municipal Champions](#) are adopting best management practices to save money, protect public safety, and conserve freshwater.



Water Softeners:

- Water softeners use special resin beads to help remove hard water minerals such as magnesium and calcium before the water is used in our homes.
- When water enters the softener, the resin beads attract and trap the hard water minerals like a magnet.
- Because the resin bead can only capture so many minerals, the softener periodically flushes them with salt water (brine) to remove the minerals from the resin and recharge the system.
- This water goes to a wastewater treatment plant where the salt passes through the system and enters into local rivers and streams, or through a septic system and into groundwater.
- Is your water softener Salt Wise? [Take this 5-minute self-assessment.](#)

Dust suppressants:

- It's less commonly known that salt is also applied to the roads during warmer months.
- These salts are used to suppress dust on gravel roads by trapping moisture.

Fertilizers:

- Some potassium fertilizers contain chloride (KCl).
- The state of Minnesota estimates that fertilizer use accounts for 23% of the chloride applied in MN each year. Wisconsin does not have a total chloride budget.



A 12-ounce coffee mug full of salt is enough to treat a 20-foot driveway or 10 sidewalk squares. If scattered correctly, the pattern should look like the image below.



The cost of salt has more than doubled since 2006. During the winter of 2019-20, the Wisconsin Department of Transportation (WisDOT) spent over \$33 million dollars on salt! ([source](#)).

The DOT is committed to the adoption and promotion of Salt Wise practices: staff education, equipment calibration, and the incorporation of liquid brine. Between Madison and Milwaukee, [Jefferson County has become a statewide leader in salt reduction](#) by focusing on best practices and the use liquid brine for both anti-icing and deicing. These efforts helped the county cut salt use by nearly 9 million pounds last winter, saving tax-payers over \$500,000.

Hidden Costs of Oversalting

Once salt is in the environment it doesn't go away. It ends up in our lakes, rivers, streams and wetlands. Chloride from salt degrades freshwater ecosystems. It only takes 1 teaspoon of salt to pollute 5 gallons of water to a level that is toxic to native aquatic organisms (395 mg/L). Naturally occurring concentrations of chloride are >1 mg/L throughout most of Wisconsin, but our surface water, groundwater and soil have been absorbing virtually all of the salt spread in the state for more than six decades. **The widespread use of salt has led to the steady salinization of surface water and groundwater, threatening freshwater resources and our drinking water.**

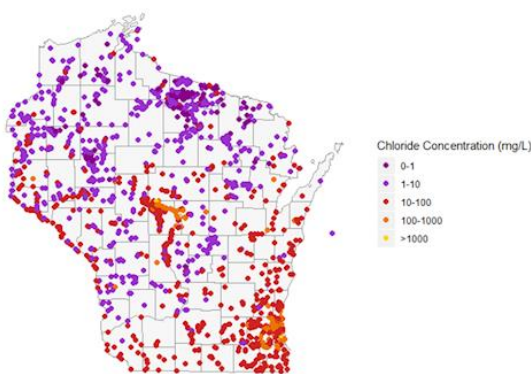


Figure by Linnea Rock using data from [waterqualitydata.us](#)

Chloride concentrations in surface waters.

Salt weakens the concrete, brick and stone that make up our homes, garages, bridges, and roads. One ton of rock salt causes between \$800 and \$3,300 of damage to buildings, bridges and other infrastructure ([source](#)). Nationwide, we spend over \$5 billion annually to repair salt damage to roads and bridges and we're not keeping up ([source](#)).



Salt can stress plants and animals that have adapted to freshwater environments. Before reaching lethal levels, chloride (the negative ion in sodium chloride - NaCl), has a variety of direct and indirect impacts on the health of organisms in aquatic ecosystems.



Spotted salamanders and wood frogs are two amphibians that are rarely found once pond chloride concentrations exceed 200 mg/L. Increased salt concentrations make wood frogs more susceptible to parasites. The embryonic survival of spotted salamanders decreases by 32% at 145 milligrams of chloride per liter and 97% at 945 milligrams per liter. This is equivalent to three teaspoons of salt in five gallons of water.

Removing salt from water is cost-prohibitive. Once salt gets into water it is very difficult to remove. Treatment, like reverse osmosis or ion exchange, is costly to install and even more expensive to operate. It could cost millions or even billions of dollars, so preventing salt from entering our drinking water resources in the first place is the most cost-effective solution.

Road and sidewalk salt can irritate your pets' toes, feet, and skin. Problems can also arise if a dog eats salt or licks their paws after a walk. Excess salt can cause toxicity concerns, throw off their electrolyte balance, or cause hypertension, cardiac arrhythmias, vomiting, increased urination, increased thirst, muscle tremors, or seizures. Keep your pets healthy by shoveling first, and applying only the right amount of salt to keep sidewalks safe.



We rely on salt to keep our roads safe in the winter and to soften water in our homes year-round but using more salt than is needed comes with a [heavy price](#). In Wisconsin and much of the United States, chloride from salt is infiltrating into our lakes, streams and groundwater. Learn more about [#thetruecostofsalt](#) and how you can make a difference.

WI Salt Wise is a coalition of organizations from across Wisconsin working together to reduce salt pollution in our lakes, streams and drinking water. Our primary goals are to: educate residents, leaders and winter maintenance professionals on salt pollution and solutions, provide training and promote best practices to reduce salt pollution and recognize contractors committed to using the [right amount](#) of salt for conditions.



See next page for more about how you can help reduce salt in our waters!



Cut The Salt, Wisconsin: Reducing Road Salt Benefits Environment, Economy

By Kathryn A. Kahler - Wisconsin Natural Resources magazine

https://issuu.com/wisconsinnaturalresources/docs/wnr_winter_singles_final/s/17642504

Road salt helps keep Wisconsin's highways and sidewalks safer in winter, but using more salt than needed comes at a price.

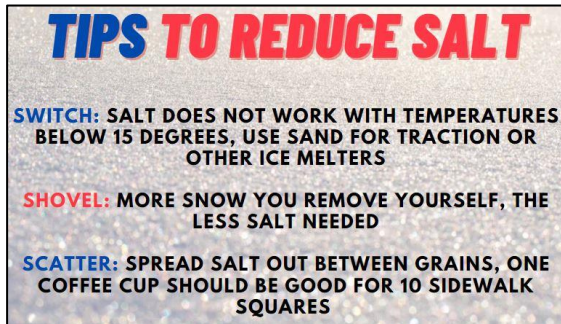
Research shows that drinking water supplies and freshwater ecosystems are becoming increasingly salty in northern regions around the globe. Just one teaspoon of salt is enough to pollute five gallons of water. This salinization can cause the release of potentially harmful radionuclides and metal ions like radium, mercury and lead into the water.



Salt causes the deterioration of roads and infrastructure, vehicles and vegetation and can contribute to human health concerns. In lakes and streams, it inhibits plant growth, impairs reproduction in some aquatic species and reduces biodiversity.

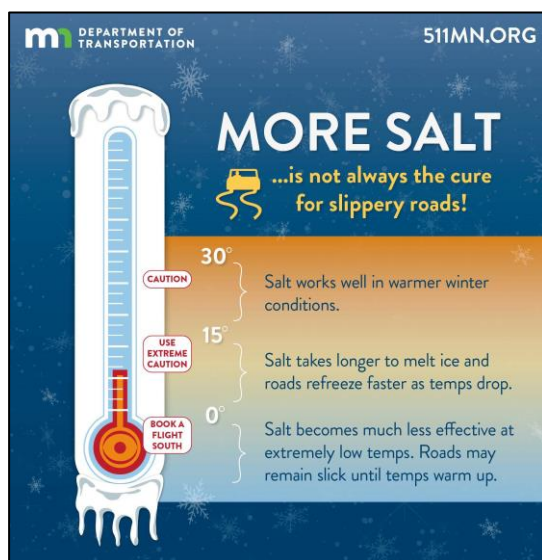
But the news isn't all bad. Municipalities around the state have adopted best management practices for salt use that have started to make a big difference.

They may wet salt before application — which keeps salt from bouncing off roads and into ditches — and employ anti-icing techniques. Anti-icing uses liquid salt brine in advance of winter storms to prevent ice from bonding to surfaces, reducing salt use by as much as 50%. Other best practices include storing road salt on impervious, covered surfaces to prevent salt from leaching into the ground, and using variable application rates and equipment calibration to avoid over-application of road salt.



Homeowners can help reduce salt use in several simple ways.

- Clear snow before it turns to ice. Shovel or sweep early and often during a snow event.
- Use salt sparingly, scattering so there is space between grains. No more than a 12-ounce coffee mug full of salt is enough for a 20-foot driveway or 10 sidewalk squares.
- Salt only works when pavement temperature is above 15 F, so switch to sand on colder days.



- Sweep up leftover salt from driveways and sidewalks after it is needed. Dry salt can be reused or, in some communities, dropped off for recycling.
- If you hire a contractor, encourage them to enroll in a free Smart Salting class through the Wisconsin Salt Wise coalition, wisaltwise.com. Wisconsin Salt Wise includes the DNR and other government agencies and nonprofit partners. The group's website is packed with information for homeowners, municipal road crews and maintenance professionals on how to help reduce salt pollution in lakes, streams and drinking water.



Water Softener Solutions

Every year, tons of salt from water softeners go directly into lakes and streams via sewage treatment plants and into groundwater via septic tanks, contributing to freshwater salinization.

Water softeners are widely used in areas that get their drinking water from groundwater, which is rich in minerals that can form buildup on appliances and plumbing, reducing their efficiency. The softener removes these minerals but creates salted water released as waste.

After passing through a wastewater treatment plant or your septic system, this salted water ends up in our freshwater, making it all a little less fresh. Septic systems can't filter out salt, nor do treatment plants have viable technologies to remove salt from wastewater.

To help reduce salt use and save money, check your water softener's efficiency. You also can soften less water in your home. If both hot and cold water are softened, work with a plumber to disconnect some or all cold water from the softener. If you can tolerate some effects of hard water in your home, you can reduce salt use significantly.

Alternatives to regular water softeners also are emerging that use different technologies to prevent hard water scale, said Allison Madison, sustainability and development coordinator for the Wisconsin Salt Wise coalition. "Technology using electromagnetic fields and template-assisted crystallization are the most promising salt-free alternatives for hard water, the primary reason for water softeners in southern and eastern Wisconsin," Madison said. These alternatives are effective, though not yet mainstream, she added, but they could soon be viable options to help reduce salt use.

World Wetlands Day
2 February 2023



<https://www.worldwetlandsday.org/>

What is World Wetlands Day?

World Wetlands Day is celebrated each year on 2 February to raise awareness about wetlands. This day also marks the anniversary of the Convention on Wetlands, which was adopted as an international treaty in 1971.

A United Nations International Day

On 30 August 2021 the UN General Assembly adopted Resolution 75/317 that established 2 February as World Wetlands Day.

Why World Wetlands Day?

Nearly 90% of the world's wetlands have been degraded since the 1700s, and we are losing wetlands three times faster than forests. Yet, wetlands are critically important ecosystems that contribute to biodiversity, climate mitigation and adaptation, freshwater availability, world economies and more. It is urgent that we raise national and global awareness about wetlands in order to reverse their rapid loss and encourage actions to conserve and restore them. World Wetlands Day is the ideal time to increase people's understanding of these critically important ecosystems.

What is the theme for World Wetlands Day in 2023?

Wetland Restoration the theme for 2023 highlights the urgent need to prioritize wetland restoration.

Who is behind World Wetlands Day?

The World Wetlands Day awareness campaign is organized by the Secretariat of the Convention on Wetlands. Contracting Parties of the Convention on Wetlands have been celebrating World Wetlands Day since 1997, when it was first established.

Who can join?

World Wetlands Day is open to everyone, as these ecosystems are important for us all.

Northwoods Journal Online

Would you like to read current issues of the *Northwoods Journal* online? Go to www.marinettecounty.com and search for "Northwoods Journal." We can also send you an e-mail reminder when each new issue is posted online. Contact Anne Bartels, Information & Education Specialist at 715-732-7784 or email anne.bartels@marinettecountywi.gov.



Culvert Replacements & Wetland Restoration Improve Pike Habitat

By Chuck Druckrey, Water Resource Specialist - Land Information Department

When most anglers hear the words “spawning run” they think of the annual walleye run when tens of thousands of walleye leave the Bay and run up local rivers to mate and lay their eggs. The walleye are followed closely by spawning suckers, sturgeon and other fish. Fewer people are aware that northern pike also have a spring spawning run, because pike don’t congregate below dams or lay their eggs in gravel-bottom rivers. Northern pike begin their spawning run when the snow starts melting, and instead of big rivers, pike seek out small creeks and ditches that warm up quickly, often while the big rivers are still covered with ice.



Northern pike swim up these small waterways, often for many miles, following drainage ditches and road ditches into connected wetlands. Here the pike lay their eggs on flooded vegetation, in water only a few inches deep. The eggs hatch quickly and the small pike, called fry, hang out in the wetlands for a few weeks where they feed on tiny insects and zooplankton. As the high water recedes, the pike fry drift slowly back to the Bay where they will grow into adults.

Along the way, pike have to navigate numerous culverts that can prevent their upstream movement. Despite their appearance, pike are not the strongest swimmers! So culverts that are too small, or improperly installed, can stop their migration. Fry drifting downstream can also be trapped by culverts that are set too high above the bottom of the waterway, or are sloped in the wrong direction.



In the spring this road ditch is used by pike to reach an upstream spawning area but the original culvert was undersized and the water velocity was too high. A larger culvert was installed and the eroding road embankment was fixed.

In an effort to improve pike spawning, Marinette County Land & Water Conservation is partnering with the Fish and Wildlife Service to improve pike spawning habitat and replace culverts that are an impediment to pike movement. This year we got the plans and permits in place to restore more than 2 acres of pike spawning marshes in the Town of Peshtigo and grade more than a thousand feet

of drainage ditch that will connect hundreds of acres of prime pike spawning habitat to a nearby stream.

In 2022 Marinette County Land & Water Conservation also replaced two culverts to improve fish and aquatic organism passage. One large culvert on a small creek was “perched” above the stream bed. A perched culvert (below) has a small waterfall at the outlet that prevents many fish, including pike, from traveling upstream. The second photo shows the replacement culvert with a natural bottom.



This culvert was perched above the stream. During low flow this culvert prevents the upstream movement of fish and other aquatic organisms.



The new flat-bottom culvert is set below the bottom of the stream so it can fill with sand from the stream bed. Culverts with natural bed material are much better for all aquatic organisms.

Another culvert installed under a driveway was undersized (at left). Small culverts develop high velocity and pike have difficulty swimming against fast currents, especially when trying to navigate a narrow culvert.

Next year the LWCD will be conducting an inventory of culverts on waterways and ditches used by pike. This inventory will identify substandard culverts and allow us to prioritize culvert replacements. Over the next three years we hope to replace many of these culverts to restore the connections between wetlands, small streams, and the Bay.

For more about the northern pike, visit https://dnr.wisconsin.gov/sites/default/files/topic/Fishing/Species_northernpike.pdf. For questions about the culvert project, contact Chuck Druckrey at 715-732-7528 or Chuck.Druckrey@marinettecountywi.gov.

How JWST Is Changing Our View of the Universe

<https://www.scientificamerican.com/article/how-jwst-is-changing-our-view-of-the-universe/>



The Tarantula Nebula is a nursery of dust and gas where new stars are being born. Hot young stars sparkle in blue at the center of this image from JWST's NIRC2, and rusty ripples at the outskirts represent cooler gas where future stars will form.

Close your eyes and imagine “space,” and there’s a good chance your mind will pull up a picture taken by Hubble. The space telescope became a household name in the 1990s as the images it captured appeared on TV and in magazines, newspapers and movies. Over the decades it created a shared visual lexicon of outer space and seeded multiple generations’ imaginations with visions of glowing nebulae, haunting planets and faraway galaxies. More than 30 years after launch, Hubble is still going strong. But now its successor promises to outdo it.

The first photos from the James Webb Space Telescope (JWST) went out to the world on July 12, 2022, and they are stunners. The clarity and level of detail are unprecedented. Seeing the telescope’s new views of some familiar objects - from the oft-photographed Carina Nebula to the planet Neptune - feels like putting on new glasses with a stronger prescription. Only the first batches of JWST photos have been released so far, but each image has created a stir, suggesting that in the coming years the telescope’s pictures will infiltrate the public subconscious just as thoroughly as Hubble’s.

The triumph is especially sweet given what it took for JWST to get here. Scientists started planning it more than three decades ago, and the effort to build the observatory fell so far behind schedule and so far over budget that many feared it would never be launched at all. When the telescope finally lifted off on December 25, 2021, with an ultimate price tag of nearly \$10 billion, astronomers felt a rush of relief. In the subsequent six months JWST proved to be working even better than planned, and astronomers really began to enjoy themselves.



For more information, images, and videos about the JWST, visit:

- <https://webb.nasa.gov/>
- <https://webbtelescope.org/>
- <https://www.stsci.edu/jwst>
- <https://www.nature.com/articles/d41586-022-01860-3>
- <https://www.space.com/james-webb-space-telescope-best-images-all-time-gallery>



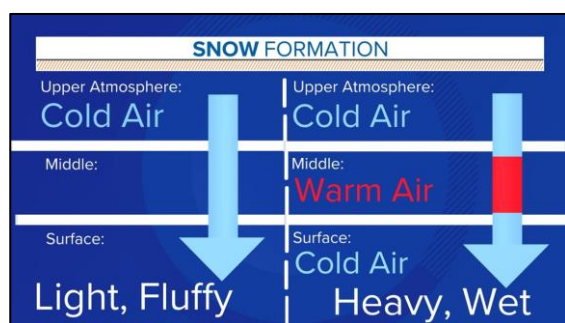
How Winter Works

https://issuu.com/wisconsinnaturalresources/docs/wnr_winter_singles_final/s/17642501

Know your Snow!

If you've ever built a snowman or been in charge of shoveling the driveway after a large snowstorm, you certainly know the difference between wet and dry snow. Wet snow is heavier to shovel but perfect for packing. Dry snow is light and airy, the kind of snow you can occasionally use a broom instead of a shovel to clear off the sidewalk. These different types don't just fall by chance. There's a science to the weight of snow, and it starts high above the ground.

When a snowflake falls through the atmosphere, it encounters different air pockets. If one of those pockets is above freezing, 32 F, the snowflake will melt just a little bit. That extra moisture stays with the snowflake as it continues down to the ground. If the snowflake spends its entire journey in temperatures well below freezing, it will never melt and remains light and dry. "Warmer" snowflakes hold more moisture and size when they land. This is why milder winter days, with temperatures closer to freezing, bring higher accumulating snow events.



Winter for Wildlife

Furbearers: Let's talk **torpor** — it's a cool strategy many of our furbearers, including skunks and raccoons, employ to make it through the season's colder spells. "It's not a true hibernation," said DNR biologist Shawn Rossler, "but torpor lowers metabolic rate to reduce the amount of energy the animal needs to use to stay warm and alive." Other furbearers, like the beaver, stay active all winter but must adapt to the ice cover to survive. A beaver will enter unfrozen water via a hole in the ice and hold its breath to access its food caches. "These (caches) were prepared and staged in the late fall, prior to the ice forming," Rossler said.



For smaller mammals, like mice and voles (below), the **subnivean zone** is the way to travel. "This is an area of air pockets and tunnels that form above the ground and under deep layers of snow," Rossler said. These tunnels allow smaller mammals to move around and access food, but they also create convenient snack spots for bigger mammals with excellent hearing. Fox and coyote



can listen for the smaller mammals traveling through the tunnels and then pounce through the snow to find their dinner.



Migratory birds: "We have some ducks and geese that handle the cold extremely well, while we have some ducks that are in Argentina by the first frost in Wisconsin", says DNR biologist Taylor Finger. Though most birds can tolerate the cold, biologists may become concerned if all accessible water freezes or if the snow is too deep to access food. Extended sub-zero temperatures can have a significant negative impact on migratory birds.

Resident birds: for birds such as turkey, grouse (below) or woodcocks, the amount of snow can impact their ability to walk, move and access food. Dry snow often is considered better for birds, Finger said, because it's easier to scratch through for food. When heavy, wet snow falls, it can make movement difficult or impossible.



Want to help the birds this winter? Include high-energy food like suet near your feeders. Make sure food is accessible — shovel the area around the feeder for birds that feed on the ground. To provide water, maintain a bird bath that does not freeze.

Winter and You

Snow and cold weather create challenges for people, too, and we have our unique ways of getting through. "The human body is amazing, and when it comes to the cold, the body will prioritize key organs," said Dr. Jeff Pothof of UW Health. This means the body will send blood and heat to the heart, lungs and brain and will not prioritize extremities, which is why you notice your fingers and toes getting cold first. Shivering may seem subtle, but it's a good way for muscles to generate heat for the body to use.

When it comes to snow amounts, the impact can hit more than just your commute to work. Heavy, wet snow usually leads to more people in the emergency department, according to Dr. Pothof, due to overexertion from shoveling, especially for those with cardio disease. Unfortunately, snowblower accidents also pop up like "clockwork" with every first snow. The accidents often happen when someone attempts to clear their snowblower by reaching into the auger. Do not try this at home.

And finally, to dispel the popular myth, *there is no direct correlation between being in the cold and actually getting a cold*. However, being cold stresses your body and hormones, weakening your immune system and making you more susceptible to catching the bug.

U.S. Fish and Wildlife Service launches Center for Pollinator Conservation

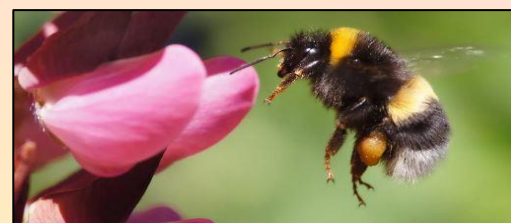
<https://www.fws.gov/program/center-pollinator-conservation>



In December, the U.S. Fish and Wildlife Service launched the **Center for Pollinator Conservation** to address the decline of pollinator populations across North America. The national center will contribute science, provide decision support, and coordinate and share best practices with land managers for overcoming some of the biggest challenges facing pollinators.

"The Center for Pollinator Conservation will advance our existing conservation efforts and welcome all those interested in enhancing pollinator populations," said Service Director Martha Williams. The center will initially launch as a virtual collaborative space and will focus on three key themes: highlighting the importance of pollinators, understanding and responding to threats and coordinating action to reverse declines.

During the past 30 years, the scientific and conservation communities have documented a steep decline of pollinator populations. Examples include the decline of the American bumble bee (below) by 90% and the monarch butterfly by 80%. Pollinators face challenges like climate change, pesticide exposure, and habitat loss. The center will work to amplify and add to the ongoing efforts to improve the state of pollinators.



Since 2015, the Service has dedicated more than \$25 million to conserve pollinators, particularly the monarch butterfly (<https://www.fws.gov/initiative/pollinators/monarchs>). Establishing the center is another major investment to protect and promote pollinator health. The Service will continue to make pollinators a priority, share progress with interested parties and base decisions on the best available science.

Pollinators benefit from widespread, ongoing conservation actions, which help reduce threats. These efforts include planting native plants to provide pollinators food from flowers that bloom in spring, summer and fall, and avoiding or limiting use of pesticides by following label instructions.

The Service encourages federal and state agencies, Tribes, academia, non-government organizations and other interested parties to strategically align pollinator work and connect with the center. Embracing a diversity of groups interested in conserving pollinators will help everyone achieve broader pollinator successes. If interested in partnering with the Center for Pollinator Conservation, contact Interim Center Director Kelley Myers at kelly_myers@fws.gov. For more about pollinator conservation, visit online at <https://fws.gov/initiative/pollinators>.



Why Being Outdoors in Winter is So Very Good for Kids

<https://tinkergarten.com/blog/why-being-outdoors-is-essential-for-wellness-even-in-winter>

By design, winter is a time of rest for the natural world. Plants and animals in all different climates slow down in winter and benefit from the chance to restore. Winter also offers unique sensory experiences that, when you slow down to take them in, are inspiring and enriching for all ages. Even through a quick stretch when it's terribly cold out, we grow more resilient when we learn to manage challenging conditions - something kids struggle with more and more.

Increasingly, misconceptions have rebranded winter as the season to stay indoors. On the surface it makes sense - animals hibernate, so humans follow suit and stick inside the house. But, no matter how animals rest in winter, they are never disconnected from nature - they simply shift their approach. Nature remains where they belong, and it's where we belong too.



Studies show that kids today spend, at best, anywhere from 50% to 70% of the time we did outdoors. Kids have lost 12 hours of play time out of each week since 1970 - a huge loss. As a nation, we gave ourselves a D- on our US Report Card on Physical Activity for Children and Youth with more than ¾ of our kids failing to get the minimum required daily physical activity.

Worse yet, the increase in sedentary, indoor lifestyles coincides with increases in many chronic childhood health conditions, including childhood obesity, asthma, attention deficit disorder and vitamin D deficiency. Kids have already lost so much time for healthy play outdoors - how can we take 25% of what is left away by eliminating an entire season? Plus, being outdoors is a great way to safely see the people we love!

The answer is right outside our doors. While alarming trends continue to increase, the evidence that exposure to nature and play directly benefits health continues to mount.

Just a few of the wellness benefits of outdoor play:

- Kids who spend more time outdoors are more physically active, and there is no shortage of research that physical activity drives positive health outcomes.
- Doctors also know daily doses of fresh air and sunlight increase circulation, vitamin D, boost immune systems, and promote overall wellness.
- Time spent in natural settings also contributes to healthy sleep patterns in babies, toddlers and kids. And proper sleep drives all kinds of beneficial health outcomes.
- Kids who spend time outdoors get sick less often. The perception that you'll catch a cold outside is just plain wrong. Stagnant, indoor environments are breeding and sharing grounds for all

kinds of germs, and some studies show that being cold may even trigger the immune system.

"It is not only medically sound, but plain common sense that running around outside in the winter is far more beneficial than being cooped up indoors." - Dr. Michel Cohen, Author and Founder of Tribeca Pediatrics

- Nature and play lower stress. Time spent in natural settings is restorative and reduces anxiety for kids and for adults. Children are particularly vulnerable to the impact of stress and stress hormones, and this time is extra stressful on us all. Plus, if you can join your kids, your stress will reduce too, making it easier to provide a more supportive environment for kids.



- Nature and play bring joy! Learning to find and experience that joy is another way to give children enriching, positive emotional experiences.
- Play in the cold gives kids grit. Winter gives kids the opportunity to learn that they can manage when life gets a little challenging. They get the message that they have the resources to persist and make the best of what life hands them.

On board with cold-weather outdoor play?

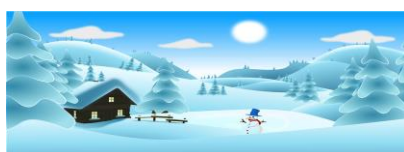
Commit to winter outdoors by trying to get outside every day this winter, even if just for a little while. Find a play group or even just one other family that wants to join you in getting out each day. Set a big goal for the new year like the energized group of families in the 1,000 Hours Outside community. Or, just aim to get regular, meaningful time outdoors every week this winter.



Gear matters - and getting cozy after may be the best part!

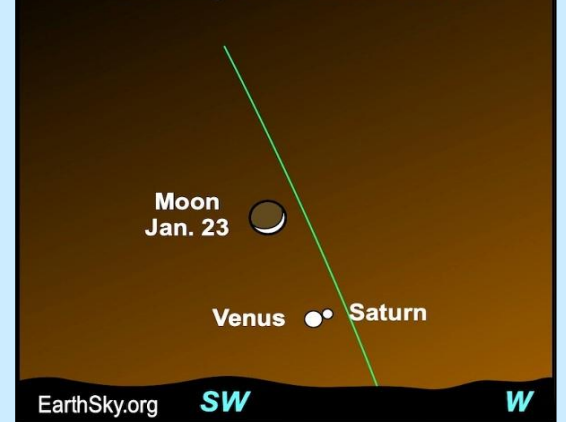
To make outdoor time last and last, check out Winter 2023 Gear Guide to find affordable ways to make cold and cool winter play comfortable for you and kids. At holiday time, put gear for you and the kids on your wish lists or check out our Winter Gear Swap DIY activity for ways to freecycle and exchange outgrown gear with other local families.

Then, build a great "come back inside" rituals. Think hot cocoa, blankets, warm socks on the radiator. Make "returning to coziness" a part of being outdoors. It's a part that we can easily nail, that kids love and that they start to associate with the joy of being outside.



Some January Astronomy!

January 22, 2023 Evening
Looking West-Southwest

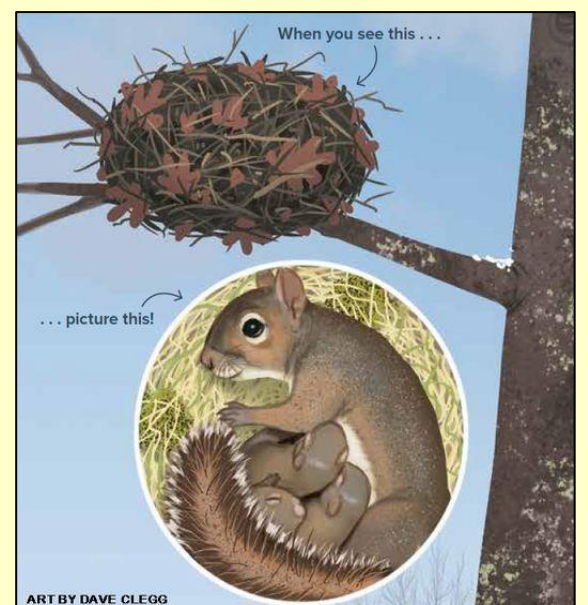


A few people have told us they've already spotted Venus, now exceedingly low in the west after sunset. By January 2023, Venus will be easier to spot as it climbs higher in the twilight each evening. By January 22, 2023, Venus and fainter Saturn will appear to brush past each other on the sky's dome.

The pair will be less than a half degree apart, less than the diameter of a full moon. On the following night, the pair will be joined by a thin young crescent moon for a remarkable sight. And there are more planetary pairings ahead in 2023! Visit <https://earthsky.org/astronomy-essentials/best-of-2023-night-sky-events-not-to-miss/> to see what else will be popping up in January!



Look Up - You Might See a Winter Squirrel Home!



Wild Word of the Day: DREY

Have you ever spotted a messy pile of dried leaves and small branches up in a tree? That's likely a drey (pronounced DRAY) - a nest where squirrels rest and raise their babies! The drey may look sloppy to you, but it's actually a well-made, sturdy home. It's the perfect place to keep squirrel babies safe from bad weather and predators. Learn more: <https://rangerrick.org/range.../look-up-go-on-a-winter-walk/>.



For Kids – Make a Winter Wreath

<https://tinkergarten.com/activities/make-a-winter-wreath>



Invite kids to make a winter wreath using the treasures that nature provides in your area this time of year. Wreaths can be a festive addition to your holiday decor or make a wonderful gift for loved ones. Here we share three ways to make a homemade wreath to spread winter joy to family and friends and help kids connect with the natural world.

Collect winter treasures

Grab a container and head outside on a walk in your yard, neighborhood or a local park. Notice what is growing in your area this time of year. Collect fallen leaves, pine cones, tree fruits and seeds and anything else you can find in your winter outdoor spaces. If you have evergreens or other plants growing in your yard, cut a few sprigs, too. Then, help kids use their found winter treasures to create one or more of these wreaths:

Cardboard wreath

Step 1: Make a cardboard frame

Cut a circle out of a piece of cardboard and then cut a smaller circle inside. **Tip:** Use two bowls of different sizes to trace your inner and outer circle.



Step 2: Attach twine

Tie one end of a piece of twine or string around the cardboard ring. Then, wrap it around the ring and secure the end to make a loom for kids to weave treasures in and out of. (You can also skip this step and offer glue for kids to attach their treasures to the cardboard.)

Step 3: Decorate!

Invite kids to weave their nature objects through the twine. Or, offer school glue and a paintbrush for kids to stick their treasures. Let kids work at their own pace and weave to their heart's content, if you have time. Try to remember that it's the *process* of gathering and adding things that matters, not how marvelous the final *product* is.

Step 4: Display and enjoy!

Tie a piece of twine around one side of the cardboard ring and make a loop for hanging. Then, find a special spot in your home to hang your winter wreath for family and friends to enjoy!

Grapevine or Wire Wreath

Step 1: Purchase a wreath frame

Most craft stores carry wire or grapevine wreath

frames in a variety of sizes. These frames provide a sturdy and weather-friendly foundation for a homemade wreath.

Step 2: Decorate!

Invite kids to weave their nature objects through the spaces between the wires or vines. You can also use twine or wire to secure treasures that don't fit well through the spaces (like pine cones). To add fragrance, offer cinnamon sticks, rosemary sprigs or other herbs!

Step 3: Display and enjoy!

Tie a piece of twine around one end of the frame and work together to find the perfect spot to display your wreath (a special spot in your home, on the door, on a tree, etc.).

Ice Wreath

Step 1: Gather a freezer-safe container

Grab a container that can be placed in the freezer. A bundt cake pan will create the perfect wreath shape, but you can also use a pie or cake pan or any circular container.

Step 2: Make your ice wreath

Follow these steps to make a wreath of frozen treasures:

- Fill your cake or pie pan with water and layer in your winter treasures. You can also add orange slices, cranberries or cinnamon sticks for fragrance and a pop of color!
- Put both ends of a 10-12 inch piece of twine into the water so that they will freeze in the ice, forming a handle.
- Keep your pan outside until it freezes (if temperatures are below freezing). Or, freeze in the freezer (at least 24 hours).
- Keep checking back to observe how the water and contents are changing as they freeze. Take pictures!

Step 3: Display, observe and enjoy!

When it is fully frozen, remove from the freezer and put the pan in a sink full of warm water to loosen the ice. Then tip the wreath out.

Take it outdoors and observe, marveling as the sun streams through it. Hang it from a tree limb and observe. Watch as kids interact with it, using various senses.



Why is this activity great for kids?

Designing a winter wreath using found objects supports kids' [creativity](#), [problem solving](#) and fine motor skills. Working with natural objects is also a workout for kids' [sensory systems](#). This activity also invites kids to notice the gifts that nature provides in your area this time of year, helping them connect with the cycles and rhythms of the natural world.

DNR Asks Public to Report Mudpuppy Observations

<https://dnr.wisconsin.gov/newsroom/release/65051>

The Wisconsin Department of Natural Resources (DNR) is asking the public to report any observations of mudpuppies they may accidentally catch while fishing this winter. Data collected from these sightings will help determine the distribution and range of the species statewide.

[Mudpuppies](#) are Wisconsin's only fully aquatic salamander and can be found in streams, rivers, ponds and lakes year-round. Due to their elusive behavior, surveying can be difficult and labor-intensive. However, because mudpuppies can be a common bycatch during the winter ice-fishing season, officials are hoping that anglers will share their mudpuppy observations with the DNR this winter.



The DNR encourages those who catch a mudpuppy while fishing to snap a picture of it, then gently remove the fishing hook and release it back into the water. Try not to touch the mudpuppy too much because amphibians have sensitive, permeable skin.

"Observations from the public are incredibly valuable," said Lena Carlson, DNR Conservation Biologist. "Every report allows the DNR to have a better idea of how mudpuppies are doing in the state. This information will show us where we will need to direct future management efforts to help declining populations."

Once considered a common amphibian species in Wisconsin, evidence suggests that populations may be declining. They have been listed as a species of special concern in Minnesota and are currently threatened in both Iowa and Illinois. Wisconsin's mudpuppy populations have not been studied extensively, and there are still many unanswered questions.

More information about Wisconsin's mudpuppies and other herpetofauna can be found on the [Herps of Wisconsin webpage](#).

Mudpuppy observations and photographs can be submitted to DNRherptiles@wisconsin.gov. Please include location details and any pictures that were taken.



Practice Ice Safety on All Waterbodies this Winter!

<https://dnr.wisconsin.gov/newsroom/release/64736>

The Wisconsin Department of Natural Resources (DNR) urges the public to practice ice safety on all of Wisconsin's waterbodies and remember that no ice is safe ice as they venture outdoors this winter. Recent water rescues serve as chilly reminders that early-season ice on any Wisconsin waterbody is thin, weak and potentially life-threatening to anyone looking to get a jump on winter fun. None of the early-season breakthrough rescues were fatal incidents.

"Temperature swings, strong winds, currents, underground springs feeding lakes and rivers vary widely across Wisconsin," said Major April Dombrowski, DNR Recreational Safety and Outdoor Skills Section Chief. "These factors are why no ice is ever considered safe, especially not this early in the season."



Get Ice Status from Local Sources

The DNR does not monitor ice conditions. If your plans include access to or use of an ice-covered waterbody, contact your local fishing clubs, bait shops or outfitters for ice conditions. "These places routinely check ice conditions and can give you the best and most current conditions," said Dombrowski. "If you can plan your outing without any travel over ice, do it. And if you are going to be on some ice, let someone know your plans and follow them."

Conditions Vary on Waterbodies

A waterbody can have its own characteristics. Check if the lake has inlets and outlets. Know whether its narrows are spring-fed or have currents like rivers, both of which can thin the ice. Some smaller lakes can have aerators that are run throughout the winter, either covering a large area towards the center of the lake or may have smaller aerators placed by private property landowners adjacent to their shore and piers.

It is equally as important to stay alert for pressure ridges or ice heaves. These can be dangerous due to thin ice and resulting open water. They are often created, move or grow with changes in temperatures and high winds. Pressure ridges and ice heaves can happen on Wisconsin's largest lake, Lake Winnebago, a popular home to sturgeon spearers, and the Bay of Green Bay.



Lake Winnebago can experience pressure ridges and ice heaves, which can move or grow with changes in temperature and wind.

Winds, Navigation Channel Are Recipe for Flowing Icebergs on Bay of Green Bay

Anyone using the Bay of Green Bay for any reason this winter should be especially cautious.

The Bay of Green Bay is about 120 miles long and 10 to 20 miles wide. According to DNR Marine Warden Team Supervisor Lt. Ryan Propson, navigation channels serving as ship highways cause the huge water body to only completely freeze over occasionally. Users must pay extra attention to changing weather conditions, including high winds, and be knowledgeable of the maintenance of the navigation channel to avoid becoming stranded on free-floating icebergs.



The U.S. Coast Guard worked with local and state agencies to rescue 66 fishermen who were stranded on three separate ice chunks that became detached from the shore Thursday in Door County in Feb. 2021.

During any time of the winter, but especially when the shipping channel is being maintained, any high wind can create waves under the ice. The force of the waves causes the cracks to form, leading to large sections of ice breaking off and floating away. Similar situations can occur due to cracking with large or sudden temperature changes.

Ice Safety Basics

Here are a few basic ice safety tips to remember:

- Carry a cell phone, and let people know where you are going and when you'll return home.
- Wear proper clothing and equipment, including a life jacket or a float coat, to help you stay afloat and to help maintain body heat.
- Wear ice creepers attached to boots to prevent slipping on clear ice.
- Carry a spud bar to check the ice while walking to new areas.
- Carry a few spikes and a length of light rope in an easily accessible pocket to help pull yourself – or others – out of the ice.
- If you fall in, remain as calm as possible. While attempting to get out of the water, call for help. Anyone who attempts to rescue you should use a rope or something similar to avoid falling through themselves.
- Do not travel in unfamiliar areas or at night.

Have a plan in place noting where you will be and when you plan to return. Along with leaving a written note of your plans, keeping a charged cell phone is also recommended. Check out [the DNR's Ice Safety webpage](#) for more information on staying safe on the ice, including tips for creating ice claws and what to do if you fall through ice.



Women – Learn Outdoor Skills at the BOW Annual Workshop!

<https://www3.uwsp.edu/cnr-ap/bowWI/Pages/default.aspx> or <https://www.facebook.com/WisconsinBOW/>



The 25th Annual Winter BOW Workshop is February 3-5, 2023! Join BOW for the annual 'BOW in the Snow' fun at Treehaven UW-Stevens Point Field Station near Tomahawk. We'll be snowshoeing, cross-country skiing, ice fishing, winter camping, and more. There are still spaces available in more than 20 different classes. This is a weekend-long, multi-course event with patient instructors and like-minded women, delicious food, stunning scenery, camaraderie and fun! We are offering a good mix of indoor and outdoor winter-themed activities. *No experience is necessary* and we provide all equipment.

Included in the registration fee:

- Four hands-on classes (3.5 hours each)
- 2 nights lodging
- 6 wonderful meals plus wild game and vegetarian appetizers during social hour
- Evening programs
- Morning "stretch and relax" yoga
- Door prizes and a chance to win raffle prizes

This workshop has maximum capacity of 60 participants. Lodging is in a modern dorm with bathrooms in each room.



For registration information, sessions available, and more, visit <https://www3.uwsp.edu/cnr-ap/bowWI/Documents/Winter%202023.pdf>.

Becoming an Outdoors Woman (BOW) offers hands-on, outdoor workshops held in a safe, supportive atmosphere with patient, enthusiastic instructors. No experience or special equipment is necessary. BOW is for adult women of all ages and fitness levels.

The program began in 1991, offered through the University of Wisconsin-Stevens Point. The first workshop, held at Treehaven Field Station near Tomahawk, filled to capacity with over 100 participants. This successful program, founded by Dr. Christine Thomas, has become popular in more than 40 states and several Canadian provinces.

Today, Wisconsin's BOW program is still going strong, and we still hold multi-course workshops twice a year at Treehaven Field Station as well as *Beyond BOW* events almost every month. In 2016, we celebrated the 25th anniversary of the program, and with the response we get from our participants, we expect this is only the beginning.



JANUARY | 2023

OUTDOOR ALMANAC

1

Look and listen for Northern Cardinal's *purdy, purdy, purdy* song; **Dark-eyed Junco's** musical bell-like trill; White-breasted Nuthatch's *ankh, ankh, ankh* calls; and Black-capped Chickadee's *chick-a dee-dee* call.



3

In winter, groups of American Crows often have a lookout (aka a sentinel) that caws regularly while the others feed. If you hear a single crow cawing, look for the rest of the group feeding nearby.

6

Full Moon



7

Observe your shrubs and fruit trees after the first snow. Chewed twigs and evergreen leaves with ragged edges are a sign of deer. Cleanly nipped, angled twig ends close to the ground or top of the snow are a sign of rabbits.

10

Spend an hour outside after dark listening for hooting owls. This is the best time of year to hear Great Horned Owls, Barred Owls, and Eastern Screech-owls as they set up territories and find mates.

12

Look for Eastern Bluebirds, Tree Sparrows, **Snow Buntings**, American Goldfinches, and other songbirds scratching along the edges of roads for grit, which they store in their gizzards. Since birds have no teeth, they need the grit to help grind up the seeds and fruit pits that make up their winter diet.



16

When ice forms on interior lakes, Bald Eagles move to river mouths along the coast where they can fish in the open water. The mouth of the Merrimack often has a number of wintering eagles.

18

Signs of coyote breeding season can be found in parallel **coyote tracks**, scent markings, and duet howling.



20

River otters do not hibernate during winter and remain active by using holes in the ice to breathe and come to land. If you are in an area where river otters live, look for the long slide marks they make in the snow when gliding on their bellies.

23

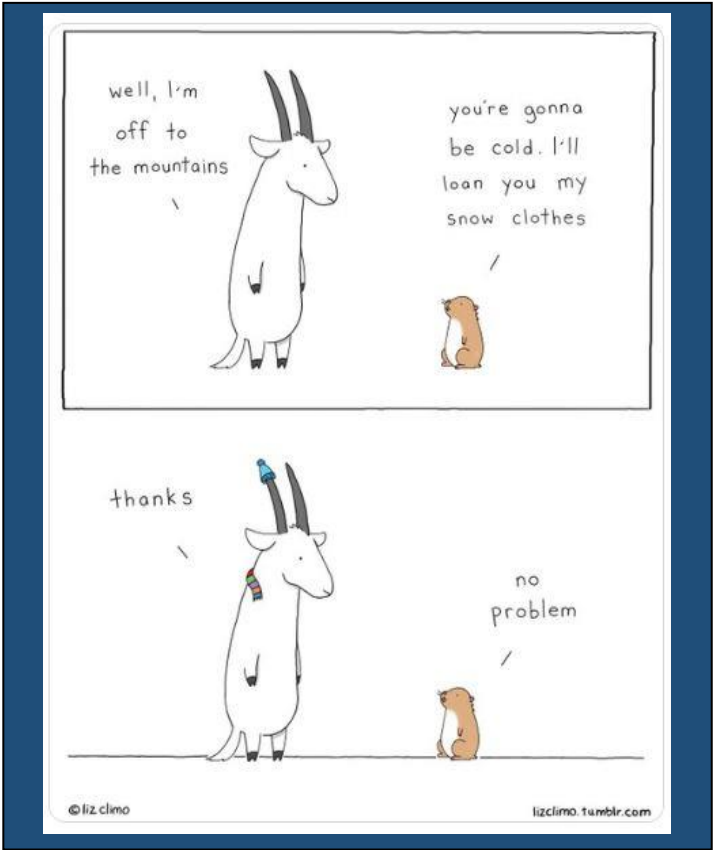
The beauty of bark is most easily appreciated in winter. Look for the distinctive coverings of white ash (interconnected narrow diamonds); quaking aspen (pale, grayish green, smooth on the branches and rough on the older trunk); American beech (silvery gray and very smooth); and sugar maple (grayish, thickened vertical strips broken into irregular rectangles).

27

Although **black bear** mating took place in early summer, cubs are being born now while the sows are in their dens. Because of a process called delayed implantation, the fertilized eggs don't begin to develop until late fall.



massaudubon.org



Don't Forget Water for Birds in the Winter!

<https://blog.nwf.org/2014/12/dont-forget-water-for-birds-in-winter/>



Throughout the hot summer months, backyard birders like me faithfully supply all the fresh water our feathered friends need for drinking, bathing or simply cooling off. By this time of year, however, most of us have covered up or put away our birdbaths, fountains and other water features, assuming that birds won't need them until next spring. But that's not true, experts say.

"For birds and other wildlife, **water is just as important in the cold months as it is during summer,**" says NWF Naturalist David Mizejewski. "If there's no snow in your area, there is literally no water, which means birds can be in trouble."



An American robin visits a heated birdbath during a snowstorm in Smithtown, New York.

Even in places with abundant snow and ice, it **costs birds precious calories and body heat to melt frozen water.** Backyards that provide fresh, clean, liquid water during winter tend to host more avian visitors than do frozen yards. In winter, "water is as big an attraction as feeders," says [Sally Roth](#), author of *The Backyard Bird Feeder's Bible*.

Here are some tips for easily and safely providing water for wildlife during the cold months:

1. Before the cold sets in, replace delicate solar or fountain birdbaths with sturdier, winter-ready water features. Because ice can cause cracks and leaks, concrete baths should be stored or covered in winter.
2. Place baths in a sunny area to make them more visible to birds and to help keep the water liquid.
3. While birds are unlikely to submerge themselves in very cold weather, you can help them stay dry and drink more easily by adding several stones to the bath or placing a few sticks on top that the animals can use as perches.



4. Even during winter, birdbaths (as well as feeders) should be cleaned regularly.
5. To keep water from freezing, consider adding an immersion-style water heater. More recent models will turn off if the water in the bath dries up.
6. If using a heater, add a ground-fault interrupted circuit (available at hardware stores) to prevent electric shorts. Check



A group of eastern bluebirds gathers at a birdbath on a snowy day in Burlington, North Carolina.

that cords and outlets are sheltered from snow or ice buildup.

7. As a homemade alternative to a heater, place a light bulb in a flower pot and put a small water basin on top of the pot.
8. A simpler option - particularly if you have no outdoor electric outlet - is to buy several heavy-duty plant saucers that will not be cracked by ice and replace frozen baths with fresh ones each morning.
9. Avoid adding glycerin to a birdbath as antifreeze; if birds ingest too much, it can dangerously elevate their blood-sugar levels. Glycerin solutions also may mat birds' feathers, decreasing insulation at a time when the animals need it most.



A de-icer in a birdbath

For more tips about helping birds in winter, visit:

- <https://www.audubon.org/news/how-welcome-winter-birds>
- <https://gl.audubon.org/news/dos-and-don%E2%80%99ts-winter-bird-feeding>
- <https://asri.org/news-events/articles-2020-01/brrr-feeding-audubon-offers-tips-to-help-birds-during-winter-weather.html>

Participate in the Great Backyard Bird Count - Coming up in February!

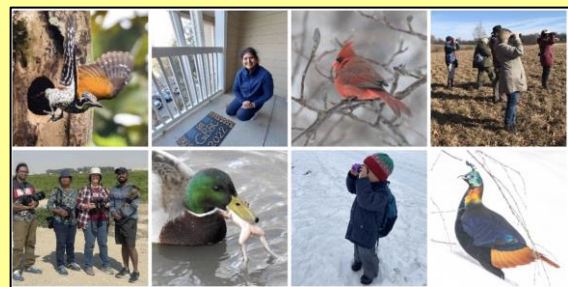
<https://www.birdcount.org/>

Spend time in your favorite places watching birds, then tell us about them! In as little as 15 minutes notice the birds around you. Identify them, count them, and submit them to help scientists better understand and protect birds around the world.



Each February, for four days, the world comes together for the love of birds. Over these four days we invite people to spend time in their favorite places watching and counting as many birds as they can find and reporting them to us. These observations help scientists better understand global bird populations before one of their annual migrations.

Launched in 1998 by the Cornell Lab of Ornithology and National Audubon Society, the Great Backyard Bird Count (GBBC) was the first online citizen-science project (also referred to as [community science](#)) to collect data on wild birds and to display results in near real time. Birds Canada joined the project in 2009 to provide an expanded capacity to support participation in Canada.



In 2013, we became a global project when we began entering data into eBird, the world's largest biodiversity-related citizen science (community science) project. Each year our participation grows as more people of all ages around the world spend their weekend counting, learning about, and celebrating birds. See [results from past years](#) highlighting the data and trends from the Great Backyard Bird Counts.

The Great Backyard Bird Count is an inter-organizational effort between the Cornell Lab of Ornithology, National Audubon Society, and Birds Canada. We work together to bring the joys of bird watching to our members. Whether you count one bird or hundreds, participating is easy and fun for all ages! Let birds bring you closer to nature and to each other by spending four days in February with us!

Visit <https://www.birdcount.org/participate/> on how to participate, ID birds, and enter data from your observations.



Prune Oak Trees in Winter to Help Prevent Oak Wilt & Cool Facts about Bobcats!

<https://dnr.wisconsin.gov/newsroom/release/65276> &
<https://www.facebook.com/USFWS> and <https://www.konnechq.com/bobcat-facts/>

The Wisconsin Department of Natural Resources (DNR) reminds Wisconsin residents that now is the time to prune oak trees, as the risk of harmful pests spreading tree diseases, such as oak wilt, increases in the spring. **Oak wilt is Wisconsin's most destructive oak disease** (affected leaves shown below), killing thousands of healthy trees annually. It's common in the lower two-thirds of the state and spreads farther north each year.



Winter is the ideal time to prune trees since branch damage or weak branch structure is more visible, and pests that cause harmful tree diseases are inactive in cold temperatures. Oak wilt is one such disease that spreads through tiny sap-feeding beetles attracted to open wounds on trees.



"What's encouraging about oak wilt is that preventing and slowing its spread takes only the most basic measures," said Paul Cigan, DNR Forest Health Specialist. Cigan says Wisconsin residents should only prune trees in winter. Pruning oaks from April through July places them at the greatest risk for oak wilt infection and should be avoided when possible.

Cigan also suggests keeping firewood transport local. He also suggests consulting a certified professional if you suspect oak wilt by finding oaks with sudden, mid-to-late summer leaf drop.

Prune young trees to establish a central trunk, proper trunk taper and good branch structure and spacing. Prune older trees to remove dead or hazardous limbs. In addition, it's recommended to prune landscape trees throughout their lifetime to maintain strong structure and remove dead wood.

Follow the [DNR's Oak Harvesting Guidelines](#) to reduce risk of oak wilt while oak harvesting in a forest setting. Learn more about oak wilt on the [DNR website](#). Also visit these sites for more about the disease and how to prevent it:

- <https://hort.extension.wisc.edu/articles/oak-wilt/>
- <https://hort.extension.wisc.edu/articles/oak-wilt-management-what-are-the-options/>
- https://www.fs.usda.gov/Internet/FSE_DOCS/stelprdb5347329.pdf



Is your winter mood bobcat? Do you bundle up in your furry layers to stay warm, live a solitary life, and get wet when you need to but generally avoid water? Do you mark your home range with urine and feces and leave claw marks on... ok, you probably don't do that one. Did you know bobcats remain active during the winter months? While not as adapted to extreme cold conditions as their northern relative, the Canada lynx, a bobcat's dense coat keeps them warm, even when the temperatures are below freezing.

Bobcats are generally nocturnal, although they may be active on occasion during the day. The species is territorial and persists in its home range, often requiring large areas of a habitat that support a steady food supply. They are excellent swimmers and climbers. Bobcats typically hunt rabbits, hares, rodents (especially squirrels), and birds. They sometimes eat reptiles, amphibians, invertebrates, and fruits. In urban areas, they are regular scavengers.

Of all the wildcats in North America, bobcats are the most prevalent. Their numbers are huge, although it's difficult to get an exact number on their population, or even a believed estimate, because there are so many of them, and they are solitary animals that humans rarely see.

🐾 Ever thought about why bobcats are called bobcats? These animals have a beautiful tail that differentiates them from the other similar cat family members. They have bobbed tails or short shrubby tails.

🐾 Bobcats are pretty good runners. They can reach the speed of thirty miles per hour. However, they love to walk or sneak in while hunting.

🐾 They live in a range of habitats, including swamps, deserts, and even suburban areas.

🐾 They stealthily sneak up on prey, and then they jump!

🐾 Wild Bobcats can live up to 15 years.

🐾 They are good climbers and swimmers.

🐾 Most bobcats hunt around dawn and dusk (crepuscular).

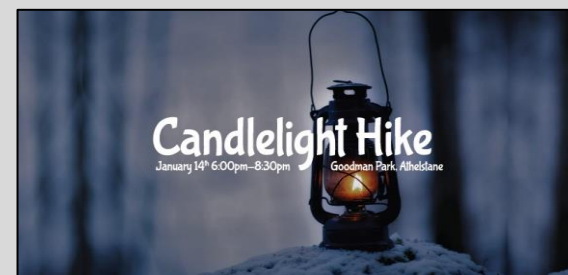
🐾 They are normally solitary.

🐾 Mothers can give birth to 1-6 kittens, who are blind and can't open their eyes. Initially, they survive with their mother's milk. At around five months, they learn to hunt. In their eighth or tenth month, they leave the mother's den and live independently.



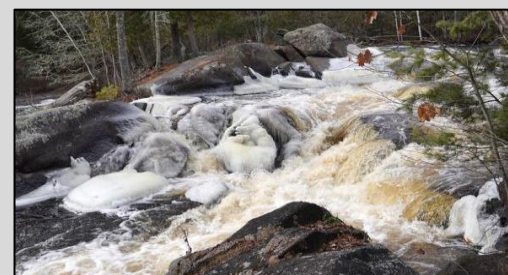
Candlelight Hike at Goodman Park

<https://www.facebook.com/events/558407029632252/?ref=newsfeed>



Take an evening stroll with us at Goodman Park! Hike or snowshoe an illuminated path through the park including the bridge over Strong Falls (below). Afterwards, warm up by the fire in the Goodman Lodge while enjoying a cup of hot cocoa!

Address: N15201 Goodman Park Rd, Athelstane. Regular Park Fees Apply (\$5 per vehicle). No pre-registration is needed.



Otter at Goodman Park

For more about Marinette County events, visit <https://www.facebook.com/ExploreMarinetteCounty>.

County Outdoor Recreation Links

For more about outdoor recreation opportunities in the County and information, visit <https://www.marinettecounty.com/departments/parks/outdoor-recreation/links/>.

New Cross-country Ski Trail in Middle Inlet

A new ski trail near the Lake Mary fire tower is available for use – a grand opening will be held in the spring. It's just off Lake Mary Road in Middle Inlet, and has plowed access, and is not a hard trail. No park pass is required.

Other cross-country ski trails in Marinette County include areas in the Peshtigo State Forest, the Woods Road ski trail and Hemlock Curve Nature Trail both near the city of Peshtigo, and Kirby Lake trails outside of Crivitz. Not all are groomed. Maps and more information are available at

- <https://p.widencdn.net/hucwxc/Skiing-the-Peshtigo-River-State-Forest>
- <https://dnr.wisconsin.gov/topic/StateForests/govearl/recreation/winter>
- https://www.marinettecounty.com/i_marinette/pu/e5d2d55c13b2/ski_trail_brochure.pdf
- https://www.marinettecounty.com/i_marinette/pu/e5d2d55c13b2/nature_trail_brochure.pdf

For regional northeast WI area ski trails, visit <https://www.skinnyski.com/trails/ski/listings.asp?region=ne-wi>.



Forestry and the Wisconsin Economy

<https://dnr.wisconsin.gov/topic/forestbusinesses/factsheets>



The forest products industry in Wisconsin provides more than 64,000 full and part-time jobs and has a total industry output of \$24.5 billion and value-added of \$7.1 billion. It ranks 11th in terms of number of full-and part-time jobs, 9th in value-added, and 3rd in industry output in the state. Every ten jobs in the forest products industry support additional thirteen jobs in other sectors in the state. Combining direct, indirect, and induced effect, the industry contributes over 140,000 jobs with an annual gross output of \$38 billion.



The forest products industry:

- is the number one employer in ten counties: Florence, Iron, Lincoln, Marathon, Price, Rusk, Sawyer, Taylor, Trempealeau, and Winnebago.
- is one of the top ten employers in 31 counties: Adams, Ashland, Barron, Brown, Burnett, Chippewa, Clark, Crawford, Dunn, Florence, Forest, Iron, Langlade, Lincoln, Manitowoc, Marathon, **Marinette**, Oconto, Outagamie, Price, Rusk, Sawyer, Shawano, Taylor, Trempealeau, Vernon, Vilas, Washburn, Waupaca, Winnebago, and Wood.
- is the number one industry for value-added in ten counties: Ashland, Chippewa, Florence, Price, Rusk, Sawyer, Taylor, Trempealeau, Winnebago, and Wood.
- is one of the top ten industries for value-added in 33 counties: Adams, Ashland, Barron, Brown, Chippewa, Clark, Crawford, Dunn, Florence, Forest, Iron, Langlade, Lincoln, Manitowoc, Marathon, **Marinette**, Menominee, Oconto, Oneida, Outagamie, Portage, Price, Rusk, Sawyer, Shawano, Taylor, Trempealeau, Vilas, Washburn, Washington, Waupaca, Winnebago, and Wood.
- is the number one industry for industry output in 16 counties: Adams, Ashland, Brown, Chippewa, Florence, Iron, **Marinette**, Oneida, Outagamie, Price, Rusk, Sawyer, Trempealeau, Waupaca, Winnebago, and Wood.
- is one of the top ten industries for industry output in 38 counties: Adams, Ashland, Barron, Bayfield, Brown, Chippewa, Clark, Crawford, Dunn, Eau Claire, Florence, Forest, Iron, Jefferson, Langlade, Lincoln, Manitowoc, Marathon, **Marinette**, Monroe, Oconto, Oneida, Outagamie, Portage, Price, Rusk, Sawyer, Shawano, Sheboygan, Sr. Croix, Taylor, Trempealeau, Vilas, Washburn, Washington, Waupaca, Winnebago, and Wood.

- Brown County has the largest number of forest products industry jobs, industry output, and value-added in the state.
- Trempealeau County has the largest number of sawmills and wood products jobs, industry output, and value-added in the state.
- Brown County has the largest number of pulp and paper products jobs and industry output in the state whereas Winnebago county has the highest value-added.

The DNR Division of Forestry has used 2018 data to model the economic impacts of the [forest industry in Wisconsin \[PDF\]](#) as a whole and for each individual county using the Impact Analysis for Planning (IMPLAN). This software was originally developed by the U.S. Forest Service in cooperation with the University of Minnesota and Federal Emergency Management Agency (FEMA). The model is designed to estimate economic effects of an industry on the local or regional economy. For more details about the database and how we've used IMPLAN, contact the [division's forest economist](#). (For forestry fact sheets by county, visit the title website.)

Economic Contributions of Urban Forestry

Wisconsin's urban forests (trees in cities, suburbs, and other developed areas) are an important component of natural resources, making significant economic contributions to local, state and national economies.



In a ground-breaking study led by the Wisconsin DNR, a comprehensive analysis of the economic contributions of urban and community forestry was completed across Wisconsin and fifteen other states within the Northeast-Midwest region. To see Wisconsin's economic impact numbers, employment number, industry outlook and a resource valuation, see the Wisconsin [full report \[PDF exit DNR\]](#) and [fact sheet \[PDF exit DNR\]](#). Regional, Methodological and other state reports and factsheets can be found on the [Northeast-Midwest State Foresters Alliance website \[exit DNR\]](#).

Reports & more information:

- [Statewide Report: Economic Contribution of Forest Products Industry to Wisconsin Economy \[PDF\]](#) (Based on 2018 IMPLAN data)
- [Statewide Report: Economic Contribution of Forest Products Industry to Wisconsin Economy \[PDF\]](#) (Based on 2017 IMPLAN data)
- <https://forestrynews.blogs.govdelivery.com/2021/07/26/wisconsins-forest-resource-past-present-and-future/>
- <https://dnr.wisconsin.gov/topic/forestlandowners/woodlandownerorgs>

USDA Announces February 10, 2023, Application Deadline for Conservation Stewardship Program

<https://www.nrcs.usda.gov/conservation-basics/conservation-by-state/wisconsin/news/usda-announces-february-10-2023>

The next deadline for Conservation Stewardship Program (CSP) applications to be considered for funding this year is February 10, 2023. Through CSP, the U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) helps farmers, ranchers and forest landowners earn payments for expanding conservation activities while maintaining agricultural production on their land. CSP also encourages adoption of new technologies and management techniques.

"It is the largest conservation program in the United States with more than 70 million acres of productive agricultural and forest land enrolled," said Jamie Keith, Acting State Conservationist for Wisconsin.

Changes in the 2018 Farm Bill authorize NRCS to accept new CSP enrollments from 2020–2023 and makes additional improvements to the program. Some highlights include the following:

- NRCS now enrolls eligible, high-ranking applications based on dollars rather than acres.
- Higher payment rates are now available under the 2018 Farm Bill for certain conservation activities, including cover crops and resource conserving crop rotations.
- NRCS now provides specific support for organic and for transitioning to organic, production activities through CSP.

While applications are accepted throughout the year, interested producers should submit applications to their local NRCS office by the deadline to ensure their applications are considered for 2023 funding.

CSP is offered in Wisconsin through continuous signups. The program provides many benefits including increased crop yields, decreased inputs, wildlife habitat improvements and increased resilience to weather extremes. CSP is for working lands including cropland, pastureland, rangeland, nonindustrial private forest land and agricultural land under the jurisdiction of a tribe.

Online services are available to customers with an eAuthentication (eAuth) account, which provides access to the [farmers.gov](#) portal where producers can view USDA farm loan information and payments and view and track certain USDA program applications and payments. Customers who do not already have an eAuth account can enroll at [farmers.gov/account](#).

For additional information about CSP, landowners should contact their local NRCS office at the [USDA Service Center](#) for their county. For more information, visit [our website](#).

In Marinette County, contact Brody Devine, Conservation Specialist in the Land Information Department, at 715-732-7642 or brody.devine@marinettecountywi.gov.



Guess hoo's Back? Snowy Owls Dazzle Wisconsin Birdwatchers

<https://www.wpr.org/snowy-owls-return-wisconsin-bird-watchers-bird-population>



Autumn brings the first blankets of snow to Wisconsin each year, and with it the first sightings of the snowy owl.

Wisconsin Department of Natural Resources conservation biologist Ryan Brady said the snowy owl's bright white feathers and dazzling yellow eyes captivate experienced and novice bird-watchers alike. "If they're not obsessed about snowy owls, they're pretty close," he said of bird-watchers.

Snowy owls, also known by the scientific name *Bubo scandiacus*, begin their yearly journey south from the far northern tundra where they nest in big, open areas in cold weather. In the fall, the young owls begin to go out on their own, looking for a winter territory that somewhat mimics the conditions of the Arctic. How far south they come depends on the year. "It might be airports or other grasslands and fields," Brady said. "Or it might be a shoreline that has waterfowl."



This year, the first snowy owls that migrated to Wisconsin were spotted in October. So far this fall, they have been seen in Superior, Ashland and Marathon County. The start to snowy owl season has been slow this year, said Brady. In some years, dozens would have been seen by now. Each year brings dozens to hundreds of "snowies" to Wisconsin, Brady said, although the numbers vary year to year with natural population changes. "You get these big fluctuations from year to year in the number of snowy owls that are on the landscape, not just in Wisconsin, but the entire continent," he said.

During the spring and summer nesting season, the owls feed mostly on lemmings, a small rodent usually found in the tundra. The availability of lemmings greatly affects the snowy owl population, Brady said. "In some years snowy owls way up north in the Arctic will very successfully raise lots of young" before they begin to migrate for the fall and winter, he said.



While some fluctuation is natural, Brady said there could be cause for concern. The snowy owl [is listed as "vulnerable" by the International Union for the Conservation of Nature](#), just one step below "endangered."

Brady has been tracking snowy owl sightings in the state over the past decade or so. He said although it's not completely clear [how climate change may be affecting the snowy owl](#), it is affecting the ecosystems in the tundra where they breed and nest. Other threats to the beloved bird include vehicle collisions, electrocution and poisoning by rodenticide.

Despite the slow start, spotting a snowy is still possible this year before they head back north around March or April, Brady said. The best way to find one is to look in wide-open places like coastal beaches, agricultural fields and vast ice-covered bodies of water. Unlike other kinds of owls, snowy owls are active during the day, Brady said, making them easier to spot.



"A snowy owl is sitting in the open," he said "It may even be flying around actively hunting during the day, and that brings us into contact with them."

8 Amazing Owl Facts

Owls' eyes are actually tubes

They have flexible necks. The accurate measure is 135 degrees in either direction from facing forward, which is 270 total degrees of movement

Their feathers help them fly silently

A group of owls is called a parliament

Owls engage in slow courtship. Males bring offerings to a female (who's usually much larger) to convince her of his intentions. He may also perform a "sky dance" that involves tricks while flying

Number of babies depends on food supply. If supplies are low, an owl may not lay a single egg. In other years, a mother owl could lay anywhere from one to 14 eggs

Many species of owl have ears that are not only placed asymmetrically on their heads but are also different sizes. This allows the owl to receive sounds at slightly different times

Owls do not chew their food. Owls have no teeth in their beaks to chew prey. Instead, they swallow it whole or in large chunks

Treehugger

After Years of Pressure, 3M Will Stop Making 'Forever Chemicals'

<https://grist.org/accountability/3m-pfas-stop-legal-battles/>



In the face of continued legal action from states across the country, 3M, a Fortune 500 manufacturing company, will discontinue the use of "forever chemicals" by 2025.

3M makes Scotchgard and other water-repellent products which contain a class of chemicals known as per- and polyfluoroalkyl substances, or PFAS, that do not break down in the environment. PFAS has been found in nearly every state in the country and in everything from polar bears to fast food wrappers. Research has shown a link between these chemicals and public health concerns such as high blood pressure in mid-life women, stunted developmental growth, infertility, as well as kidney, liver, and testicular cancers.



In a statement, the St.Paul-based company said the decision comes on the heels of an "evolving external landscape," which includes increased regulatory pressures. In the past year, the Environmental Protection Agency, or EPA, released a [PFAS Strategic Roadmap](#), which plans to create new policies to protect public health and the environment while holding polluters accountable. In addition to the increased federal pressure, 3M has been the target of various lawsuits directed at PFAS manufacturers.

California announced a lawsuit in November that alleges 3M, DuPont, and other PFAS producers have caused far-reaching damage to public health and the environment by dealing in products laced with "forever chemicals." The lawsuit is similar to a dozen others filed in states across the country. While the lawsuits are mounting, 3M's awareness of their production problem has been festering for decades.

As early as the 1970s, the manufacturing company knew that PFAS was accumulating in human bloodstreams. According to [The Intercept](#), 3M was sued by its home state of Minnesota in 2010 and settled the suit for \$850 million, which lead to a mountain of internal documents, memos, and research to be released by the state's Attorney General's Office, showing exactly what the company knew about the harm of the products it produced.

The EPA announced in November that PFAS pollution from 3M had caused an "imminent and substantial endangerment" of the drinking water for nearly 300,000 people in the Quad Cities region of Illinois and Iowa and ordered an investigation into 3M's role in the pollution.

More about PFAs in the news:

- <https://www.wpr.org/study-pfas-green-bay-marinette-manufacturer-firefighting-foam-tyco-johnson-controls>
- <https://www.wpr.org/wisconsin-regulators-dnr-can-craft-pfas-standards-groundwater-forever-chemicals>
- <https://earthjustice.org/features/breaking-down-toxic-pfas>



Off-Season Camping Can Make Winter Wonderful

https://issuu.com/wisconsinnaturalresources/docs/wnr_winter_singles_final/s/17636740



More than 20 state parks and forests offer year-round camping, including during the winter months. Find your winter adventure in Wisconsin – we'll help you with how to pack, book and cook so your winter camp is a wonderland.

Winter Camping Basics

You may need a little more gear for winter camping than you do in warmer months, but that doesn't mean you shouldn't try to go. First, consider using a tent that's a little bit bigger than you need. You'll want extra space to store your gear, like your backpack or cooking supplies, inside the tent, so you don't have to leave them out in the snow to freeze and possibly get damaged. In the summer, it's convenient to leave your shoes or sandals outside your tent. But in the winter, bring them inside, too, so they don't get wet overnight and can stay warm with you all night long.

Cold temperatures drain batteries, so keep your smartphone, GPS, headlamps and any extra batteries in your sleeping bag or in your pocket to help keep them warm and their battery lives up. Bring a portable charger if you can.

When it's time to hit the hay, use a sleeping pad or two. Don't sleep right on the frozen ground. Channel your inner "Princess and the Pea," and layer up those sleeping pads if you can. Better yet, invest in a cot or sleeping platform to keep you completely off the ground.



And before you snuggle up for bed, move around a little bit with a few jumping jacks or some running in place to get your heart rate up and your blood pumping. It will help generate extra warmth as you drift off to sleep.

What to Wear

What you wear when camping in cold weather is important. Layer up with three layers: Start with a base layer of light- or midweight long underwear made of moisture-wicking polyester or wool; add a middle layer of insulation like a puffy down jacket and fleece pants to retain body heat; and top it off with a waterproof yet breathable outer layer to keep your other layers dry.



Keep your head warm with a wool or synthetic hat that covers your ears. No need to get fancy - a classic beanie is all you may need. Gloves or mittens? Whichever you choose, consider a pair that's waterproof, and always bring a backup set. Cotton socks may be your go-to, but that's not the best fabric choice for winter recreation. Choose wool or synthetic socks and, again, always bring extras.

Once you're dressed, pay attention to your body's cold limits. Some people are more sensitive to cold weather than others, so take care of yourself and throw an extra log on the campfire, or add that extra pair of socks if you're feeling a chill. If your fingers or toes get really cold, bust out the hand warmers and stick them in your gloves or mittens and boots.



Where to Go

Wisconsin's state park properties have great options for your winter camping adventure, with at least some campgrounds open at many properties statewide. A few ideas are listed below.

Seeking solitude? Door County's Peninsula State Park beckons. This park's 468 campsites quickly fill in the summer, but it may be easier to snag a winter campsite, with 32 options in the Tension Bay campground. Be active outside in the cooler temps by snowshoeing, cross-country skiing and sledding, and entertain your brain with wildlife viewing.

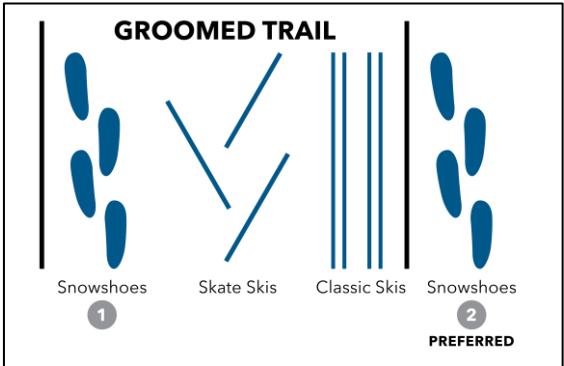


Fern Dell Gorge State Natural Area, in Mirror Lake State Park, features fantastic frozen scenes in winter.

Pattison State Park in Superior is an excellent pick for cross-country skiing, with 4 miles of trails throughout three linked loops that begin at the campground. You also can snowshoe there on a number of informal trails. When visiting Pattison, don't miss out on Big Manitou Falls, Wisconsin's tallest waterfall at 165 feet. Little Manitou Falls is no slouch either at 30 feet tall. When winter really sets in and temperatures stay below freezing, both waterfalls freeze with ice from top to bottom, a beautiful sight not to be missed.

Many county parks and state forests may also be available for winter recreation, so don't forget to check those out too.

When recreating in winter at any of Wisconsin's public lands, *remember proper trail etiquette*. That means no hiking, snowshoeing or walking your pets on groomed trails or in set tracks.



An example of trail etiquette on a groomed trail

How to Book

All campsites in Wisconsin's state parks are reservable, but not all of them are available during the winter. Reservations can be made at <https://wisconsin.goingtocamp.com/> or by calling 1-888-947-2757.

When searching the website for winter camping options, sites available during the time period you select will appear green, while sites not open will appear black.

If you're a last-minute planner or inspired by a fresh snowfall to enjoy a campout, you can reserve a campsite on the same day you want to arrive at a park, either by making your reservation online before you go or via phone call when you're at the park.

One more thing to keep in mind: Not all campsites or campground roads are plowed in winter. How will you know what to expect? Look for a message while booking your campsite or contact the property for information on current conditions.

Wherever you go this winter, plan ahead, pack some extras and embrace the winter peace!



For more winter camping tips and places to go, visit:

- <https://dnr.wisconsin.gov/wnrmag/2020/Winter/hiking>
- <https://www.travelwisconsin.com/article/things-to-do/article/wisconsin-winter-camping-a-snowy-delight>
- <https://thedyrt.com/magazine/local/winter-camping-in-wisconsin/>
- <https://troop254.org/cold-weather-camping-tips/>
- <https://www.onecrazyhouse.com/winter-camping-tips/>
- <https://www.jsonline.com/story/travel/wisconsin/day-out/2017/01/27/brave-cold-winter-camping-adventure-wisconsin/97011894/>

